

Application Serial No. 09/511,986

IN THE CLAIMS:

Each of the claims that remains pending and under consideration in the above-referenced application is reproduced below, in clean form. A marked-up version of each of the claims for which amendments are proposed here is also enclosed to identify the proposed changes to each of these claims.

Please cancel claims 49 and 57 without prejudice or disclaimer.

Please amend the claims as follows:

Sub E1 47. (Twice amended) A conductive trace at least partially formed on at least one semiconductor device component, comprising a plurality of superimposed, contiguous, mutually adhered layers, each of said layers comprising conductive polymer.

A 48. (Twice amended) The conductive trace of claim 47, wherein said conductive polymer comprises a thermoplastic conductive elastomer.

Sub E2 50. (Previously amended) The conductive trace of claim 47, configured to be carried by a single semiconductor device component.

51. (Previously amended) The conductive trace of claim 47, configured to at least partially electrically connect two semiconductor device components.

52. (Amended three times) A semiconductor device comprising:
a semiconductor device component; and
at least one conductive trace carried by said semiconductor device component, said at least one conductive trace including a plurality of superimposed, contiguous, mutually adhered layers, each of said layers comprising conductive polymer.

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53. (Previously amended) The semiconductor device of claim 52, wherein said at least one conductive trace is substantially entirely carried by said semiconductor device component.

54. The semiconductor device of claim 53, wherein said semiconductor device component comprises a layer of a carrier substrate.

55. The semiconductor device of claim 53, wherein said semiconductor device component comprises a dielectric layer disposed on an active surface of a semiconductor die.

56. (Amended) The semiconductor device of claim 52, wherein said conductive polymer comprises a thermoplastic conductive elastomer.

58. (Previously amended) The semiconductor device of claim 52, wherein said at least one conductive trace communicates with a contact of said semiconductor device component.

59. The semiconductor device of claim 58, wherein said semiconductor device component comprises a carrier substrate.

60. The semiconductor device of claim 58, wherein said semiconductor device component comprises a semiconductor die.

61. The semiconductor device of claim 58, wherein said semiconductor device component comprises a packaged semiconductor device.

62. The semiconductor device of claim 52, wherein said semiconductor device component comprises leads.

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63. The semiconductor device of claim 62, wherein said at least one conductive element contacts one of said leads.

64. (Previously amended) A semiconductor device assembly, comprising:
a carrier; and
at least one semiconductor die adjacent said carrier, said semiconductor die including bond pads; and
conductive elements electrically connecting contacts of said carrier to corresponding bond pads, each
of said conductive elements including a plurality of superimposed, contiguous, mutually
adhered layers, each of said layers comprising conductive material.

65. The semiconductor device assembly of claim 64, wherein said carrier comprises a carrier substrate.

66. The semiconductor device assembly of claim 64, wherein said carrier comprises leads.

67. The semiconductor device assembly of claim 64, wherein said conductive material comprises a thermoplastic conductive elastomer.

68. The semiconductor device assembly of claim 64, wherein said conductive material comprises a metal.

75. A semiconductor device assembly, comprising:
a first semiconductor device component including at least one contact pad;

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a second semiconductor device component including at least one contact pad; and at least one conductive element connecting said at least one contact pad of said first semiconductor device component to said at least one contact pad of said second semiconductor device component, said at least one conductive element comprising a plurality of superimposed, contiguous, mutually adhered layers comprising conductive material.

76. The semiconductor device assembly of claim 75, wherein said conductive material comprises a conductive elastomer.

77. The semiconductor device assembly of claim 75, wherein said conductive material comprises a metal.

78. The semiconductor device assembly of claim 75, wherein at least one of said first and second semiconductor device components comprises a semiconductor die.

79. The semiconductor device assembly of claim 78, wherein said at least one of said first and second semiconductor device components comprises a packaged semiconductor die.

80. The semiconductor device assembly of claim 75, wherein each of said first semiconductor device component and said second semiconductor device component comprises at least one semiconductor die.

81. The semiconductor device assembly of claim 75, wherein at least one of said first and second semiconductor device components comprises a carrier substrate.

82. The semiconductor device assembly of claim 81, wherein said carrier substrate includes a support structure and at least one conductive element in communication with said at least one contact pad thereof.

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83. The semiconductor device assembly of claim 82, wherein at least one of said at least one conductive element and said support structure comprises a plurality of superimposed, contiguous, mutually adhered layers of material.

84. The semiconductor device assembly of claim 75, wherein said at least one conductive element is located on a surface of each of said first and second semiconductor device components.

85. The semiconductor device assembly of claim 84, wherein said at least one conductive element extends across a peripheral edge of at least one of said first and second semiconductor device components.

86. The semiconductor device assembly of claim 80, further comprising a carrier substrate upon which at least one of said semiconductor dice is disposed.

87. The semiconductor device assembly of claim 86, further comprising at least one other conductive element connecting at least one other contact pad of at least one of said semiconductor die to at least one contact pad of said carrier substrate.

88. The semiconductor device assembly of claim 87, wherein said at least one other conductive element comprises a plurality of superimposed, contiguous, mutually adhered layers of conductive material.

89. The semiconductor device assembly of claim 88, wherein said conductive material comprises a conductive elastomer.

90. The semiconductor device assembly of claim 88, wherein said conductive material comprises metal.

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